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Generic limits of the Rhyparini with respect to the genus *Termitodius* Wasmann, 1894 (Coleoptera: Scarabaeidae: Aphodiinae)

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Abstract. Three distinct tibial types are recognized within the Rhyparini (Scarabaeidae, Aphodiinae). Based on this, generic limits for the species of *Termitodius* Wasmann are reevaluated, with the Old World members being transferred to *Termitodiellus* Nakane. The resulting **new combinations** are: *Termitodiellus besucheti* (Paulian), *Termitodiellus hammondi* (Krikken and Huijbregts), *Termitodiellus interruptus* (Krikken and Huijbregts), *Termitodiellus luzonensis* (Howden), *Termitodiellus monticola* (Krikken and Huijbregts). New World members of *Termitodius* are split into two genera: *Termitodius* Wasmann and *Aschnarhyparus* Makhan. *Aschnarhyparus soesilae* Makhan is here relegated to a junior synonym of *Termitodius peregrinus* Hinton, **new synonymy**, with the resulting **new combination** being *Aschnarhyparus peregrinus* (Hinton). A full description of *Aschnarhyparus* is presented, and *Termitodiellus* and *Termitodius* are diagnosed.

Introduction

The Rhyparini is a tribe of well-known termitophilous scarabs readily recognized by their carinate dorsal surface, elytral apex with bulbous projection bearing trichomes, hastate posterior prosternal process, and greatly reduced tibial spurs. The one exception to their general appearance being *Sybacodes* Fairmaire (1896), which has normally developed elytra, lacking apical modifications. For many years the majority of species were placed in two genera, *Rhyparus* Westwood (1845) and *Termitodius* Wasmann (1894). More recent works have recognized several additional genera: *Aschnarhyparus* Makhan (2006), *Hadrorhyparus* Howden (1995), *Leptorhyparus* Howden (2003), *Lioglyptoxenus* Pittino (2006), *Microtermitodius* Pittino (2006), *Monteitheolus* Howden and Storey (2000), and *Termitodiellus* Nakane (1961).

Research has been underway for a generic review and catalog of the Rhyparini for the world. Important generic-level characters were discovered while studying specimens of all described genera. In most cases, these characters substantiated present generic hypotheses. However, the genus *Termitodius* (*sensu lato*) was clearly a conglomerate and needed further generic-level division.

Material and methods

Terminology for dorsal carinae follows Krikken and Huijbregts (1987) and Howden (2003). Specimens studied are deposited in the following collections: **CASC**, California Academy of Sciences, San Francisco, CA; **CMNC**, Canadian Museum of Nature, Ottawa, Ontario; **CNIC**, Canadian National Insect Collection, Ottawa, Ontario; **HAHC**, Henry and Anne Howden collection, Ottawa, Ontario [now at CMNC]; **PESC**, Paul E. Skelley collection, Gainesville, FL; **REWC**, Robert E. Woodruff collection, Gainesville, FL; **SEMC**, Snow Entomological Museum, University of Kansas, Lawrence, KS; **USNM**, United States National Museum, Smithsonian Institution, Washington, DC.

Tibiae and the Rhyparini

Members of the Rhyparini were discovered to have three distinct forms of apical mesotibial spines. These forms are generally more prominent in males, less developed in females, and show various degrees of development between taxa. In most taxa, the meso- and metatibiae show similar development, with few noted exceptions. Members of all genera and a majority of species have been examined in consideration of

the following comments. While this character helps sort genera into potentially related groups, a full analysis is needed to determine any higher relationships and character history.

***Rhyparus*-type mesotibia** (Fig. 1). Within *Rhyparus* and similar genera, the mesotibia is apically truncate with the terminal fringe of setae complete. Males usually bear a prominent apical spine on the inner margin, perpendicular to the tibial axis. In recent years, a few genera have been recognized and removed from *Rhyparus* (*sensu lato*), and additional genera may still reside there. Genera showing this form of mesotibiae are *Leptorhyparus*, *Lioglyptoxenus*, *Microtermitodius*, *Rhyparus*, and *Sybacodes*.

***Termitodiellus*-type mesotibia** (Fig. 2) This mesotibial type has the tibial apex angulate, with a broken apical fringe of setae. The inner margin of the mesotibia is elongated beyond the tarsal insertion, the spine is somewhat parallel to the tibial axis and apically curved inward. The spine can be narrowed or distinctly blade-like. This tibial type is primarily restricted to Malesia, Micronesia, and Fiji, and in the genera *Hadrorhyparus*, *Monteitheolus*, and *Termitodiellus*. In the New World, *Nanotermitodius* has this tibial type. *Nanotermitodius* is unusual in that it initially appears to have *Rhyparus*-type mesotibia and *Termitodiellus*-type metatibia. However, closer examination reveals the apical fringe of seta to be distinctly broken on both the meso- and metatibia, thus it is placed with these genera.

***Termitodius*-type mesotibia** (Fig. 3-4) This tibial type has the mesotibia apically truncate with a complete terminal fringe of setae. The apical spine is small and perpendicular to the tibial axis, but there is a second subapical spine on the inner margin which is separated from the apex by a shallow notch. Taxa showing this tibial type have the metatibia lacking the subapical spine and notch. This tibial type is restricted to the New World genera *Aschnarhyparus* and *Termitodius*. While the dorsal habitus of *Aschnarhyparus* is similar to some Old World rhyparines, the *Termitodius*-type mesotibia is very distinct.

"*Termitodius*" (*sensu lato*)

The genus *Termitodius* was erected for an unusual beetle found living with termites in Venezuela, *T. coronatus* Wasmann (1894). Later, Hinton (1934) described and illustrated *Termitodius peregrinus*, a similar yet quite different beetle. The description of *Termitodius esakii* Nomura (1943) from the Caroline Islands followed. Nakane (1961) recognized differences between *T. esakii* and *Termitodius* from the New World, and erected *Termitodiellus* Nakane for *T. esakii*. Researchers afterward emphasize general characters and placed additional New and Old World species in *Termitodius*. To date, no one has critically examined these species, readdressing generic-level concerns.

Non-*Rhyparus* members of the Rhyparini are rare in collections and many taxa are described based on very few specimens. Careful study of original descriptions, illustrations, over 30 Old World specimens (representing 7 species), and 120 New World specimens (representing 5 species) of the genus "*Termitodius*" (*sensu lato*) revealed striking differences in tibial development and sexual dimorphism. All Old World members of "*Termitodius*" have tibial development similar to *Termitodiellus* and unlike all New World species. In addition, New World species can be split based on tibial characters, with *T. peregrinus* differing from the remaining species.

Makhan (2006) described and illustrated a new genus and new species, *Aschnarhyparus soesilae* Makhan, from a single female specimen. Makhan's descriptions provide no characters that would distinguish his taxa from any other rhyparine. These descriptions clearly indicate he had little knowledge of existing literature, nor was he familiar with the genus *Termitodius*. The holotype of *A. soesilae* has yet to be deposited in the National Zoological Collection of Suriname at the University of Suriname, as designated by Makhan, and is presently unavailable for study. Careful study of Makhan's photographs and comparison with materials at hand found no difference between *A. soesilae* and *T. peregrinus*. Thus, they are here synonymized. However, *T. peregrinus* does warrant generic distinction. Given the poor state of Makhan's description, a new description of *Aschnarhyparus* is required, and is provided here. *Termitodiellus* and *Termitodius* are simply diagnosed and a list of all presently included species is presented.

Aschnarhyparus Makhan 2006: 7

Type species. *Aschnarhyparus soesilae* Makhan 2006, by original designation.

Diagnosis. Length approximately 3.5 mm. Body of typical rhyparine appearance with strong dorsal

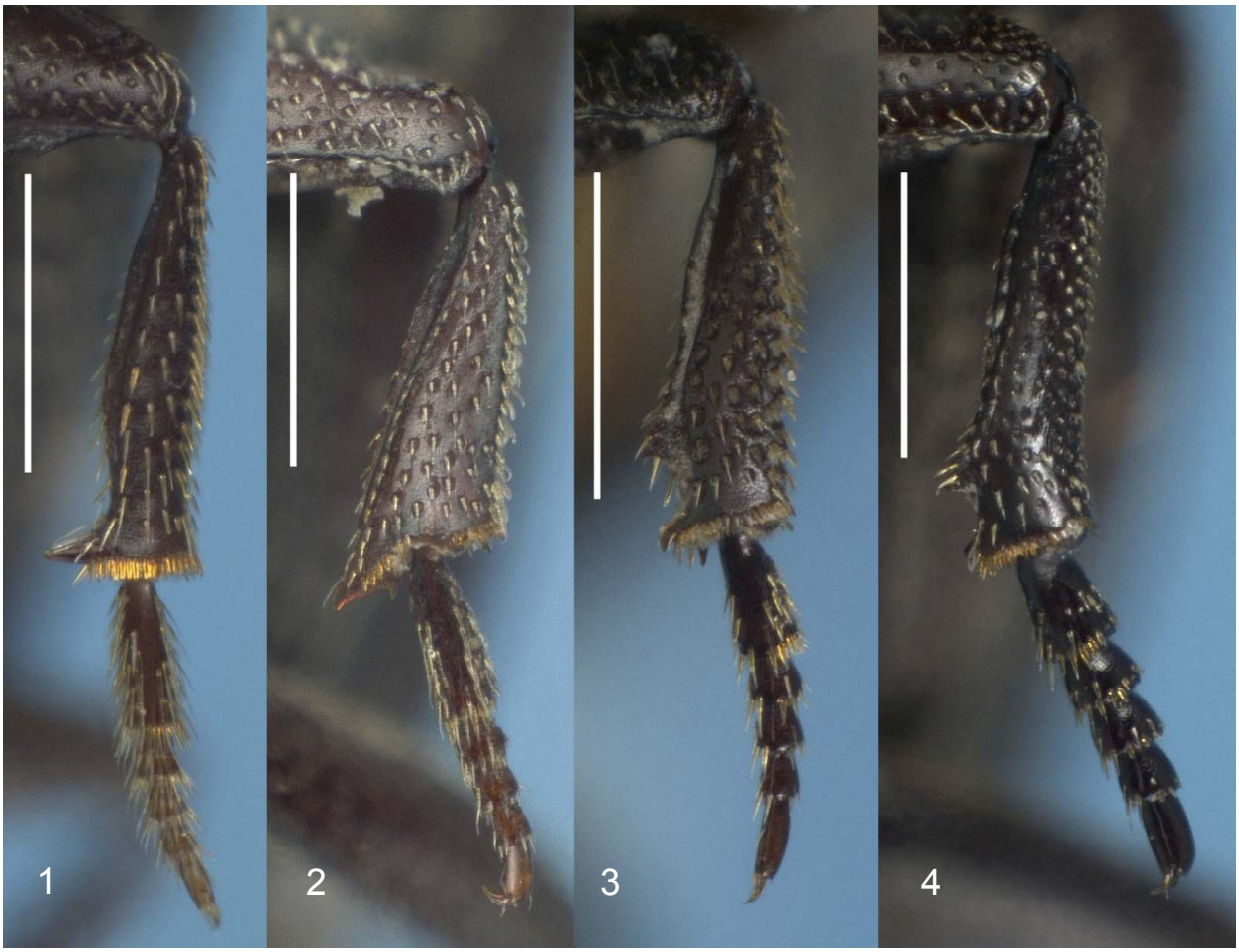

Figure 1-4. Tibial types. **1)** *Rhyparus*-type mesotibia, male *Rhyparus mexicanus* Cartwright and Woodruff. **2)** *Termitodiellus*-type mesotibia, male *Termitodiellus luzonensis* (Howden). **3)** *Termitodius*-type mesotibia, male *Aschnarhyparus peregrinus* (Hinton). **4)** *Termitodius*-type mesotibia, male *Termitodius araujoi* Reyes-Castillo and Martinez. Line = 0.5 mm.

carinae and elytron with an apical bulb and trichomes. Head with clypeus abruptly inflexed medially, submarginal lines and bead present, angulate medial tooth evident in ventral view only when head extended. Pronotum somewhat flattened, lateral margin flared, distinctly bilobed anteriorly; all dorsal carinae of similar prominence, sharply defined throughout length, not anteriorly bulb-like. Metafemur stout, moderately club-like. Meso- and metatibia not elongate, angular in cross section, somewhat flattened and gradually dilated toward apex. Mesotibia with *Termitodius*-type apical development, prominent in male (Fig. 3), weakly developed in female. Elytron elongate, approximately 3 times longer than wide; not distinctly parallel-sided, evenly rounded to terminal bulb.

Description. Length 3.0-3.8 mm. **Body** elongate; elytra narrowed from middle to apical bulb, width greatest at basal elytral third; blackish-brown to reddish-brown, frequently encrusted with debris. **Head** one-third wider than long, surface dulled or alutaceous, lacking conspicuous setae. Clypeus anteriorly inflexed, with grooved margin; lower edge sharp medially, obtusely angulate; upper edge of inflexed margin quadridentate, inner tooth on each side at lateral third, outer tooth on each side adjacent to frontal lobe; median clypeal surface circular, defined anteriorly by U-shaped groove and posteriorly by arcuate fronto-clypeal suture, enclosed area broadly convex with 2 small, central longitudinal tubercles. Vertex with four short, longitudinal carinae, bearing inconspicuous setae; two median carinae slightly closer, nearly parallel; two lateral carina converging anteriorly; vertex coarsely punctate between carinae. Frontal lobe broad, projecting more sharply anteriorly than laterally, posteriorly depressed above eye; eye barely visible dorsally when head not retracted. **Pronotum** with surface alutaceous, with 6 irregularly longitu-

Figure 5-7. Representative habitus images. **5)** *Aschnarhyparus peregrinus* (Hinton), female from Costa Rica, length = 3.5 mm. **6)** *Termitodiellus luzonensis* (Howden), male from Luzon, length = 3.2 mm. **7)** *Termitodius araujoi* Reyes-Castillo and Martinez, male from Mexico, length = 3.8 mm.

dinal carinae, interrupted by transverse row of large pits, all carinae topped with rows of inconspicuous setae; inner carina (paramedian) nearly complete, interrupted at midline, slightly convergent in anterior half; adjacent carina (discolateral) interrupted in anterior third by pit; outer carina (submarginal) distinctly outwardly sinuate near middle with adjacent deep mesad depression; all carinae extending to posterior pronotal margin; lateral pronotal margin with 2 prominent lobes, anterior lobe more abrupt, posterior lobe near middle slightly smaller; posterio-lateral margin curving inward to acute posterior angle; anterior pronotal margin tomentose; lateral and posterior margins lacking distinct marginal bead. Scutellum minute, narrow, apex acute. **Elytron** each with four sharply elevated carinae, each topped with rows of setae, each entire from base to apex, only gradually decreasing in height near apex; elytral surface alutaceous dorsally and at base, from about middle becoming glossy to apex; first carina (discomedian) separated from sutural ridge by single row of large, transverse punctures at basal 3/4, carina widening in apical 1/3 to apical bulbous area, with circularly arranged group (viewed apically) of long setae just anterior to subapical trichomes, immediately followed by major portion of apical bulb; second carina (discolateral) similar in height and development to first, separated from first carina along basal 3/4 by a double row of large punctures that may be narrowly connected transversely, with small patch long setae just before apical trichomes; third carina (posthumeral) sinuate near base, decreasing notably in height in apical 1/4, separated from second carina by double row of large punctures, punctures distinct only on basal half, carina terminating apically with very small group of setae just before apical trichomes; fourth carina (submarginal) not as prominent as other carinae, development equal to the apical half of third carina, basally separated from third carina by large, inconspicuous punctures, apically fourth carina curves dorsally and swells to become lateral portion of apical bulb; lateral marginal carina continues apically to sutural margin where it has a distinct apical projection. **Metathoracic** wings present, appearing fully developed. **Pygidium** with basal portion above transverse ridge finely setose and bearing distinct median longitudinal sulcus; apical portion below transverse ridge flattened, with median longitudinal carina and an alutaceous depression on each side; apex of pygidium rounded. **Maxilla** with apex of lacinia densely fringed with long setae. **Mentum** anteriorly emarginate, basally with deep median pit. **Prosternum** medially broadly lanceolate anterior to coxae, hastate posteriorly. **Mesosternum** short, surface finely granulate, median fourth slightly, longitudinally concave. **Metasternum**

with narrow, slightly elevated ridge separating mesocoxae, midline of metasternum with ridge on anterior half, immediately followed by deep median longitudinal groove on posterior half; laterally with group of 4 round depressions, anterior medial pit small, deep and round, anterior lateral depression groove-like, extending laterally along posterior margin mesocoxae, posterior medial depression large appearing groove-like, posterior lateral depression about half as large as posterior medial depression, often weak; metepisternum grooved over entire length. **Abdomen** with 5 visible sternites, first 4 narrow, slightly wider laterally; basal segment with basal transverse groove occupying half of length, only fourth segment with depression on each side near lateral edge; apical sternite approximately as long as preceding 3 sternites combined, basally with deep transverse groove composed of pits; medial surface with depression on each side of longitudinal median ridge, depressions variable in size; surface of all sternites with numerous recumbent setae. **Femora** with ventral surfaces completely coarsely punctured, each puncture bearing 1 seta. **Protibia** of male and female similar, narrow, nearly parallel-sided, lateral margin sinuate, apex with 2 small teeth. **Mesotibia** with ventral surface coarsely punctate, each puncture bearing 1 seta; gradually widening from base to truncate apex, triangular in cross-section, outer edge flattened, inner margin sharp; inner ventral margin with strong longitudinal groove which terminates subapically at notch on apical 1/4 (*Termitodius*-type); males with groove terminating in a prominent, acute subapical tooth, females with subapical tooth not prominent, obtuse. **Metatibia** ventral surface coarsely punctate, each puncture bearing 1 seta; tibia gradually widening from base to truncate apex (occasionally weakly concave apex), widest at apical 1/4, distinctly flattened, triangular in cross-section, outer edge flattened, inner margin sharp; inner ventral margin with strong longitudinal groove which terminates at apex. Tibial spurs of all legs not easily visible, minute or absent. **Protarsus** short, length of basal tarsomere equal to next 2 combined; apical claws of all tarsi minute. **Mesotarsus** 2/3 length of tibia, somewhat thickened, basal tarsomere dorsally punctate with setiferous punctures, length equal to tibial width at apex, which equals next 3 tarsomeres combined; mesotarsomeres III-IV shortened, length of each = width. **Metatarsus** similar to mesotarsus except basal tarsomere longer than tibial width at apex, nearly as long as next 4 tarsomeres combined. **Male genitalia** slender, tubular, gradually curved, small triangular parameres about 1/6 length of phallobase, weakly concave dorsally, with weakly hooked apex.

Distribution. Widespread in the New World tropics (Mexico to Bolivia east to Brazil and Trinidad).

Comments. *Aschnarhyparus* presently contains only one species, *A. peregrinus* (Hinton), which has been collected with termites, *Coptotermes testacea* (L.) (ex label data, Chalumeau 1981, Reyes-Castillo and Martinez 1979), and one specimen with label data "In galeria *Nasusitermes*". The majority of specimens have been collected at light traps, flight intercept traps, and in leaf litter sampling. No available evidence suggests that more than one species is present in this widespread genus.

Aschnarhyparus peregrinus (Hinton 1934)
new combination
(Figure 3, 5)

Termitodius peregrinus Hinton 1934: 340.
Termitodius bolivensis Dajoz 1971:138; Chalumeau 1981: 13-14 (syn.)
Aschnarhyparus soesilae Makhan 2006: 7-11; **new synonymy.**

Diagnosis. In general appearances, *A. peregrinus* is most similar to *Nanotermitodius peckorum* Howden (2003). *Aschnarhyparus peregrinus* differs from all Rhyparini in the world in having the broad, flattened metatibia, together with mesotibia of the *Termitodius*-type (Fig. 3). Published habitus illustrations of *A. peregrinus* are located in Chalumeau (1981: 14); Cartwright and Woodruff (1969: 5, 8), Dajoz (1971: 139), Hinton (1934: 341), Makhan (2006: 8-11), and here (Fig. 5).

Materials Examined. 85 specimens of *A. peregrinus* have been studied with the following data: **BOLIVIA**: Santa Cruz, 3.7 km SSE Buena Vista, Hotel Flora & Fauna, 430, 5-15-XI-2001, M. C. Thomas and B. K. Dozier, tropical transition forest BLT [1 PESC]; 5 km. SSE Buena Vista, Hotel Flora y Fauna, 440m, forest FIT, W63°09.128'-17°29.925', 15-24.XII.03, S&J Peck, 03-131 [1 HAHC]; same data except 6-15.XII.03, S&J Peck, 03-130 [1 HAHC]; same data except 24-31.XII.03, S&J Peck, 03-132 [2 HAHC]. **BRAZIL**: Belem, Para, IPEAN, III-17-18-1970, JM & BA Campbell [3 CNIC]; Para, Faz. Taperinha, XI-9-22-1969, JM & BA Campbell [2 HAHC]; Rondonia, 62 km SW Ariquemes, nr. Fzda.Rancho Grande, 8-20-

XI-1994, J. E. Eger, blacklight trap [2 PESC]. **COLOMBIA**: Santa Ana, Feby 1924, *Coptermes* sp. [1 USNM]. **COSTA RICA**: HOLOTYPE "/ Hiquito, San Mateo, Costa Rica, Pablo Schild / [red paper] HOLOTYPE Termitodius peregrinus Hinton / [red paper] Type No. 59266 U.S.N.M / [white paper with black border, red mark along left margin with 'Type' written vertically] Termitodius peregrinus Hinton /" [1 USNM]; Estrella Valley, Pandora, II-28-1984, Gary V. Manley [2 HAHC]; Cartago, 600m. Turrialba, CATIE, 16-20-V-1979, JM & BA Campbell [1 CNIC]; Turrialba, from H. P. Loding 1935 [2 USNM]; Heredia, La Selva (3 km S. Puerto Viejo, 10°25'N, 84°0'W), 80 m, 6 JUN 1996; R. S. Hanley, leaf litter berlese #RSHCR054 [1 SEMC]; Limon P., Valle de la Estrella Pandora, 17-20.Feb.1984, H&A Howden in dead tree [2 HAHC]; Puntarenas, 4 km. W. Rancho Quernado, 300m, 08°41'32"N-83°35'33"W, 25-VI-2001, S. Chandler, ex hard rotten log [1 CMNC]; Puntarenas, Parque Nacional Corcovado, Estacion la Leona, 08°27'N-83°29'25"W, 25-VI-2001, W. Porras, ex root/ dirt litter *Ochrama pyramidale* [10 CMNC, 4 PESC]; Puntarenas, Rincon de Osa, rainforest, 08°41.141N, 83°31.117'W, 22-26-VI-2001, 150m, S&J Peck 01-14 FIT [1 HAHC]; Puntarenas, Pen. de Osa, Est. Fund. Neot. Agua Buena, 7 km. W. Rincon de Osa, 21-25-VI-97, 80m, rain for. S&J Peck 97-24 [1 HAHC]; Puntarenas, Osa Pen., Fundacion Neotrop., 10 km. W. Rincon, 08°42'30"N-83°31'30"W, 100m, 23-VI-1997, R. S. Anderson, lowland for. litter 97-29A [1 CMNC]; Puntarenas, Osa Penn., Fundacion Neotrop., 10 km. W. Rincon, 08°42'30"N-83°31'30"W, 100m, 23-VI-1997, R. S. Anderson, lowland for. litter 97-29B [1 CMNC]. **ECUADOR**: 27 mi. SW. Quevedo, Los Rios, 50 m. II-5-1955, I. E. Schlinger & E. S. Ross collectors [1 CASC]; Napo, Limoncocha, 250m, 21.VII.1976, S&J Peck, Ber. 350, brkn. termite nest siftings [1 HAHC]; Napo, Yuturi Lodge, Rio Napo, 270 m, 0°32'54"S, 76°2'18"W, 20-21 MAR 1999, R. Brooks, D. Brzoska, ECU1B99 010, ex flight intercept trap [1 SEMC]. **MEXICO**: Chiapas, Bonampak Rd., 100km.SE Palenque, 8.VII.1983. S.&J.Peck, 230m, rainforest Berlese [1 HAHC]; Chiapas, Lacania-Chan Sayab.Edo.de Chiapas, 28-I-1977, P. Reyes-C. Col., Selva Alta Perreni four. Alt. 350m, en hormiguero de *Coptotermes* [1 HAHC]; V.C., Acayucan, 10-23-57, R. & K. Dreisbach [1 USNM]; Veracruz, Balzapote, Mpio. San Andres Tuxtla, 23-II-65, P. Reyes C., coll., In galeria *Nasusitermes* tronco podrido de *Cecropia obtucifolia* selva alto perinnifolia [1 USNM]. **NICARAGUA**: Granada Dept. Reserva Dormitila, 100 m, 11°42.50'N, 85°57.20'W, 6-9-VI-2002, R. Brooks, Z. Falin, S. Chatzimanolis, ex flight intercept trap, NIC1BFC02 255 [1 SEMC]. **PANAMA**: Chiriqui, Dolega, El Puebla Stream, June 25, 1964, A. Broce, light trap, 2000 ft. [1 USNM]; Colón, nr. Gamboa 6.1 km on Pipeline Rd., 40m, 09°06'N,79°45'W, 27-29, V 1995, J. Ashe #089b, ex: flight intercept trap, [1 SEMC, 1 HAHC]; Colón, Parque Nac. Soberania, Pipeline Rd. 09°07'N, 79°45'W, 26 V 1995 J. & A. Ashe #062, under bark [1 SEMC]; Colón, Parque Nac. Soberania, Pipeline Rd. Km 5.3, 09°07'N 79°45'W, 20-22 May 1995 J. Jolly, C. Chaboo, flight intercept trap [1 SEMC]; Colon, 14 km N jct. Escobal & Pina Rds., 02-11 JUN 1996, J. Ashe, R. Brooks, PAN1AB96 181B [1 SEMC]; Colon, 10-15 km.N.jct. Escobal & Pina Rd.s, ca 30m, 2-Jun-1996, J. S. Ashe, R. Brooks, PAH1SB96 002, under bark [1 PESC]; Colon, San Lorenzo Forest, 9°17'N, 79°58'W, flight intercept, FIT-B2-16, 21-24 MAY 2004, A. Tishechkin, IBISCA'04 [2 PESC]; Colon, Santa Rita Ridge, 300m, 10-VI-1977, H&A Howden [1 HAHC]; Colon, Santa Rita Ridge, 250 m., 09°23'N-79°45'W, 10.June.1977, H. Stockwell [2 CMNC]; Panama, N of Chepo, Carti- El Llano Rd. Km 7.5, 370 m, 4-VI-1995, 09°13'N 79°05'W, J. Ashe, R. Brooks #123, ex. under bark [1 SEMC]; Panama, Gamboa, 30m, 09°04'N 79°45'W, 3 VI 1995, Ashe & Brooks #114 ex. *Favolus* [1 SEMC]; Panama, Old Gamboa Rd., 09°04'N 79°40'W, 14-19 Nov. 1994, D. Windsor, flt. intpt. trap [1 SEMC]; Panama, S Gamboa, 09°05'N 79°40'W, Old Plantation Rd. 6.9km, 80m, 27 May 1995, J. & A. Ashe #070, ex: fungusy log [1 SEMC]; Panama, Canal Zone, Barro Colorado I., Fairchild Trail, I-28-1959, H. S. Dybas, FMNH(HD) #59-197, Berlese: B-175; bark & under bark detritus same fallen tree as #171 [1 PESC]; Panama, Canal Zone, Barro Colorado Is., 09°11'N 79°51'W, 8 July 1994, D. Banks, ex. flight intercept trap [1 SEMC]; Panama, Canal Zone, Barro Colorado I., 21-I-1959, H. S. Dybas, berlese very old rotten log [2 REWC]; Panama, Canal Zone, Barro Colorado Is., 09°10'N, 79°50'W, 20-VI-1977, H. A. Hespenheide [2 HAHC]; Panama, Canal Zone, Barro Colorado I., Gatun L., 20-28-May-1981, B. Gill [3 HAHC]; C. Z., Barro Colorado, Gatun Lake [1 USNM]; Panama, Canal Zone, Manzanita, 9-2-72, G. T. Ramirez [1 CMNC]. **PERU**: Loreto Prov., Jungle Amazon Inn, 30 mi. E. Iquitos on Amazon River, 30-XII-1984 to 5-I-1985, P. Skelley [1 PESC]; Madre de Dios; Rio Tambopata Res. 30 air km. SW Pto. Maldonado, 290m, 16-20 XI 1979, J. B. Heppner, subtropical moist forest [1 USNM]. **SURINAME**: Marowijne, Perica, 70 km E Paramaribo on East-West Road, 5 m, 5°40'28"N, 54°36'31"W, 31 MAY-5 JUN 1999, Z. Falin, B. DeDijn, SUR1F99 034, ex flight intercept trap [1 SEMC]. **TRINIDAD**: 8 km. N. Arima, Simla Res. Sta., 260m, 24-VI-8-VII-1993, lower montane rainforest FIT, S&J Peck 93-57 [1 HAHC]; 8 km. N. Arima, Simla Res.

Sta., 260m, 14-VI-1993, uv light, S&J Peck 93-32 [1 HAHC]; 13 km. S. Arima, 2 km. N. Talparo, Quesnell Farm, rain forest FIT, 22-VI-8-VII-1993, 50m, S&J Peck 93-46 [1 HAHC]; Balandra Bay, V. 1922 [1 USNM]; Tunapuna, Mt. St. Benedict, 550m, 5-21-VI-1993, summit rain forest FIT, Mt. Tabor, S&J Peck, 93-6 [1 HAHC]; Tunapuna, Mt. St. Benedict, 240 m, 4.VI.1993, buttress litter ravine bottom, S&J Peck 93-1 [1 CMNC].

Additional published data are: **BOLIVIA**: near Santa Cruz, station SA 142 (Dajoz 1971). **GUYANE**: Grand Matoury, 11.1.76 (Chalumeau 1981). **SURINAME**: District Brokopondo, 7.8.1984, D. Makhan (Makhan 2006).

Termitodiellus Nakane 1961: 26

Type species. *Termitodius esakii* Nomura 1943, by monotypy.

Diagnosis. Length approximately 3.0 mm. Body of typical rhyparine appearance with strong dorsal carinae and elytron with an apical bulb and trichomes. Head with clypeus not abruptly inflexed medially, submarginal lines and bead present in most, angulate medial tooth evident. Pronotum appearing somewhat flattened, lateral margin flared, usually distinctly lobed anteriorly; dorsal carinae sharply defined throughout length, some more prominent anteriorly, not bulb-like (Fig. 6). Metafemur stout, weakly to distinctly club-like. Meso- and metatibia not elongate, angular in cross section, somewhat flattened and distinctly dilated toward apex. Mesotibia (*Termitodiellus*-type) apically angulate, apical setal fringe broken (Fig. 2), inner margin elongate beyond tarsal insertion, apical spine somewhat parallel to tibial axis and apically curved inward, apical spine narrowed or distinctly blade-like, spine more prominent in males, weakly developed in females. Elytron somewhat shortened, approximately 2.5 times longer than wide; not distinctly parallel-sided, evenly rounded to terminal bulb.

Distribution. Presently described species from Malesia (Sumatra, Borneo, Philippines, Sulawesi) and Micronesia.

List of species.

Termitodiellus besucheti (Paulian 1983: 618) [*Rhyparus*]; Sumatra, Borneo; **new combination.**
= *Termitodius neglectus* Krikken and Huijbregts 1987: 106; Bordat 1996: 92 (syn.).

Termitodiellus esakii (Nomura 1943: 81) [*Termitodius*]; Micronesia (Yap Island in the Caroline group).

Termitodiellus hammondi (Krikken and Huijbregts 1987: 108) [*Termitodius*]; Sarawak; **new combination.**

Termitodiellus interruptus (Krikken and Huijbregts 1987: 101) [*Termitodius*]; Sulawesi; **new combination.**

Termitodiellus luzonensis (Howden 1995: 25) [*Termitodius*]; Philippines; **new combination.**

Termitodiellus monticola (Krikken and Huijbregts 1987: 104) [*Termitodius*]; Sulawesi; **new combination.**

Termitodius Wasmann 1894: 220

Type species. *Termitodius coronatus* Wasmann 1894, by monotypy.

Diagnosis. Length approximately 3.5-4.0 mm. Body of typical rhyparine appearance with strong dorsal carinae and elytron with an apical bulb and trichomes. Head with clypeus abruptly inflexed medially, submarginal lines and bead present, angulate medial tooth evident in ventral view only when head extended. Pronotum dorsally robust, usually distinctly lobed, lateral margin flared anteriorly; dorsal carinae of variable development, each carina broadened with bulbous at anterior margin (Fig. 7), carina simply broadened posteriorly, discolateral carina reduced on posterior 2/3. Metafemur long, slender, cylindrical, not notably widened apically. Meso- and metatibia elongate, circular in cross section, not flattened nor dilated toward apex. Mesotibia (*Termitodius*-type) apically truncate, complete terminal fringe of setae, apical spine small and perpendicular to tibial axis, second subapical spine on inner margin separated from apex by shallow notch, prominent in male (Fig. 4), weakly developed in female. Elytron elongate, approximately 3 times longer than wide; not distinctly parallel-sided, evenly rounded to terminal bulb.

Distribution. Known only from Mexico and northern South America.

Comments. This genus shares the *Termitodius*-type mesotibia only with *Aschnarhyparus*. They are readily distinguished based on differences in pronotal carinae (swollen anteriorly in *Termitodius*; not swollen in *Aschnarhyparus*), and in metatibial shape (elongate, cylindrical and not apically widened in *Termitodius*; shorter, flattened and distinctly widening to apex in *Aschnarhyparus*).

List of Species.

Termitodius araujoi Reyes-Castillo and Martinez 1979: 120, Mexico.
Termitodius chaki Reyes-Castillo and Martinez 1979: 125, Mexico.
Termitodius coronatus Wasmann 1894: 220, Venezuela.

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